

CLAIMS

1. A nasal cannula for collection of exhaled gases from a patient having nostrils, comprising:

two nasal prongs for insertion into the nostrils of the patient; and
a collection tube for the collection of the exhaled gases from the patient,
said nasal prongs and said collection tube being connected at a single junction, such that
the exhaled gases flow freely from said nasal prongs to said collection tube.

2. The cannula of claim 1, wherein said nasal prongs are joined in an arc substantially before being connected to said junction.

3. The cannula of claim 1, wherein said collection tube delivers said exhaled gases to a capnograph for gas analysis.

4. An oral/nasal cannula for collection of exhaled gases from a patient having nostrils and an oral cavity, comprising:

two nasal prongs for insertion into the nostrils of the patient;
an oral prong for placement near the oral cavity of the patient; and
a collection tube for the collection of the exhaled gases from the patient,
said nasal prongs, said oral prong and said collection tube being connected at a single
junction substantially near the nostrils of the patient, such that the exhaled gases flow
freely from said nasal prongs and said oral prong to said collection tube.

5. The cannula of claim 4, wherein said oral prong features a distal portion, said distal portion being bent at an angle such that it is placed near the oral cavity of the patient, substantially in parallel to the orally exhaled air stream.

6. The cannula of claim 5, wherein said distal portion features a cap, said cap being attached to said distal portion, and said cap being made of a substantially hydrophilic material, such that said cap absorbs condensation from said distal portion.

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7. The cannula of claim 4, wherein said nasal prongs are joined in an arc substantially before being connected to said junction.

8. The cannula of claim 4, wherein said collection tube delivers said exhaled gases to a capnograph for gas analysis.

9. The cannula of claim 1, and further comprising:

at least one oxygen tube for delivery of oxygen, said at least one oxygen tube being located near the nostrils of the patient; and

two oxygen inlets connected to said at least one oxygen tube and being disposed such that said oxygen flows from said at least one oxygen tube through said oxygen inlets into the nostrils of the patient.

10. The cannula of claim 9, wherein said at least one oxygen tube includes a centrally located input, substantially equidistant from said two oxygen inlets for receiving oxygen.

11. The cannula of claim 9 wherein said at least one oxygen tube comprises two oxygen tubes, one disposed on each side of said two oxygen inlets.

12. The cannula of claim 9, wherein said oxygen inlets are holes.

13. The cannula of claim 4, and further comprising:

at least one oxygen tube for delivery of oxygen, said at least one oxygen tube being located near the nostrils of the patient; and

two oxygen inlets connected to said at least one oxygen tube and being disposed such that said oxygen flows from said at least one oxygen tube through said oxygen inlets into the nostrils of the patient.

14. The cannula of claim 13 wherein said at least one oxygen tube includes a centrally located input, substantially equidistant from said two oxygen inlets for receiving oxygen.

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15. The cannula of claim 13 wherein said at least one oxygen tube comprises two oxygen tubes, one disposed on each side of said two oxygen inlets.

16. The cannula of claim 13 wherein said oxygen inlets are holes.

17. The cannula of claim 12 wherein said holes include a screen constructed of a material selected from at least one of the group consisting of a hydrophobic porous material, a wide mesh and a netting.

18. The cannula of claim 16 wherein said holes include a screen constructed of a material selected from at least one of the group consisting of a hydrophobic porous material, a wide mesh and a netting.

19. The cannula of claim 9 wherein said inlets are oxygen prongs for insertion into the nostrils of the patient.

20. The cannula of claim 13 wherein said inlets are oxygen prongs for insertion into the nostrils of the patient.

21. The cannula of claim 19 wherein said oxygen prongs are formed of a substantially hydrophobic porous material, such that said oxygen prongs are permeable to gases.

22. The cannula of claim 20 wherein said oxygen prongs are formed of a substantially hydrophobic porous material, such that said oxygen prongs are permeable to gases.

23. A method of collecting exhaled gases from a patient having nostrils, the method comprising the steps of:

(a) providing a cannula featuring:

two nasal prongs for insertion into the nostrils of the patient; and
a collection tube for collecting the exhaled gases from the patient,

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said nasal prongs, and said collection tube being connected at a single junction substantially near the nostrils of the patient, such that the exhaled gases flow freely from said nasal prongs to said collection tube;

- (b) inserting said nasal prongs into the nostrils of the patient;
- (c) attaching said collection tube to a conduit for conducting gas;
- (d) connecting said conduit to a gas analyzer; and
- (e) applying a force at said gas analyzer, such that the exhaled gases flowing through the cannula moves from said collection tube to said gas analyzer.

24. A method of collecting exhaled gases from a patient having nostrils and an oral cavity, the method comprising the steps of:

- (a) providing a cannula featuring:
 - two nasal prongs for insertion into the nostrils of the patient;
 - an oral prong for placement near the oral cavity of the patient; and
 - a collection tube for collecting the exhaled gases from the patient, said nasal prongs, said oral prong and said collection tube being connected at a single junction substantially near the nostrils of the patient, such that the exhaled gases flow freely from said nasal prongs and said oral prong to said collection tube;
- (b) inserting said nasal prongs into the nostrils of the patient;
- (c) placing said oral prong near the oral cavity of the patient;
- (d) attaching said collection tube to a conduit for conducting gas;
- (e) connecting said conduit to a gas analyzer; and
- (f) applying a force at said gas analyzer, such that the exhaled gases flowing through the cannula move from said collection tube to said gas analyzer.

25. A cannula for collection of exhaled gases from a patient and for delivery of oxygen to a patient having nostrils and an oral cavity, comprising:

- (a) two nasal prongs for insertion into the nostrils of the patient;
- (b) a collection tube for the collection of the exhaled gases from the patient, said nasal prongs, and said collection tube being connected at a single junction, such that the exhaled gases flow freely from said nasal prongs to said collection tube;

(c) an oxygen tube for delivery of oxygen, said oxygen tube being located near the nostrils of the patient; and

(d) two oxygen inlets connected to said oxygen tube and being disposed such that said oxygen flows from said oxygen tube into the nostrils of the patient.

26. The cannula of claim 25 and also comprising an oral prong for placement near the oral cavity of the patient, said oral prong also being connected at the single junction of said nasal prongs and said collection tube.

27. The cannula of claim 25, wherein said oxygen inlets are holes.

28. The cannula of claim 26, wherein said oxygen inlets are holes.

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